

PROJECT TITLE : TOBACCO STUDIES  
PERIOD COVERED : NOVEMBER 27 1981 - JANUARY 26 1982  
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#### TOBACCO LOT ANALYSES

##### Zambia MD Tobacco

In order to find other sources of supply for MD tobacco, three lots of Zambia MD tobacco were ordered (Lots 2180, 2181, 2182). Each lot was separated into four grades. The TLA on the four grades of the three samples are under way.

##### French Burley Tobacco

A TLA was made for the leaf purchases on a lot of Burley tobacco from France (Lot 3940). This tobacco has a very low TA and SN delivery. The  $\text{NO}_3\text{-N}$  content and the NO delivery are also low.

##### CSSR Reconstituted Tobacco

The physical quality of this sheet is very poor. It forms a lot of dust during cutting and does not have a good machinability on the cigarette maker. The filling power of the cut sheet was also lower than our usual reconstituted tobacco.

In comparison with LTR, the smoke analyses of this reconstituted tobacco show poor combustibility (similar to the one of the US RCB) and slightly higher DPM delivery. The other parameters are similar to those of LTR.

##### RLC, Lot 9695

This lot is the first shipment of a new RL with cooked flavours that should have a better filling power and a lower equilibrium moisture content than the former RL. Unfortunately, due to the insufficient accuracy of the conditions in the room used for the conditioning of the samples, it is difficult to make comparisons. However, the tobacco moisture content analysed during the determination of the filling power and of the firmness of the cigarettes and also during the preparation of the cigarettes for the smoke analyses, do not show any significant differences with the former RL moisture content.

Three TLA analyses were made on this lot. The first two samples were taken from two different hogsheads. The third was a mixed sample from different hogsheads. The mixed sample had a part which was lighter in colour than the rest of the sample and indeed was also lighter than the other samples. Its odour was also different. In the TLA analyses the main differences between this later sample and the other two are a higher  $\text{NH}_3\text{-N}$  level (0.58% instead of 0.20% for the others), a higher phosphate level (1.57% instead of 0.46%), a lower aldehyde delivery (1.19 mg/g of burnt tobacco instead of 1.81 mg/g of burnt tobacco) and a little higher HCN delivery (163  $\mu\text{g/g}$  of burnt tobacco instead of 122  $\mu\text{g/g}$  of burnt tobacco). A confirmation of the  $\text{NH}_3\text{-N}$  and phosphate content is under way, and the hogsheads from which the mixed sample came will be inspected.

#### EXPANDED TOBACCO

##### ETNA LGT (Lot 06000)

A TLA analysis was made on a special FC expanded blend created for incorporation into low tar cigarette blends. The TLA analysis of this expanded blend showed up about 1% more TA than the normal ET-FC (2.42% instead of  $\sim 1.40\%$  for the normal ET-FC), higher SN delivery (2.88 mg/g of burnt tobacco instead of  $\sim 1.50$  mg/g of burnt tobacco), higher DPM delivery (36.1 mg/g of burnt tobacco instead of  $\sim 26.0$  mg/g of burnt tobacco).

The reducing sugars content of this lot is also lower (6.4% instead of  $\sim 15.0\%$ ). These smoke delivery comparisons were made between cigarettes with similar physical characteristics (RTD, compressibility).

##### Benson & Hedges Expanded FC Tobacco

A special sample of expanded FC tobacco from Benson & Hedges (Canada) was analysed. The first results show a higher filling power for this sample in comparison with the normal ET-FC ex Onnens (84.0 ml/10 g at 12.7% m.c. instead of 62.4 ml/10 g at 12.9% m.c. for the Lot 0715). In consequence, the cigarettes show a better compressibility (2.84 mm at 12.4% m.c. instead of 3.23 mm of 12.4% m.c.) with a lower tobacco weight (442 mg instead of 493 mg). The tobacco analyses are similar to our ET-FC, but the smoke analyses show a lower DPM delivery (18.7 mg/g of burnt tobacco instead of  $\sim 23.5$  mg/g of burnt tobacco), lower HCN delivery (265  $\mu\text{g/g}$  of burnt tobacco instead of  $\sim 380$   $\mu\text{g/g}$  of burnt tobacco), a slightly lower aldehyde delivery (2.34 mg/g of burnt tobacco instead of  $\sim 2.80$  mg/g of burnt tobacco).

These smoke delivery comparisons were made between cigarettes with similar physical characteristics (RTD).

#### Expansion Trials in Onnens

TLA were made with two samples of expanded tobacco and one with cut tobacco for Mr. D. Borgognon. These samples are expansion trials at different temperatures with uncased tobacco. The analyses are under way.

#### ASSISTANCE TO OTHER PROJECTS

Eight reference cigarettes were made during this period for different projects: CATHERINE IR; SHOT PUT 'UK' IP; COUNTRY AU 3R; HILTON ULTRA 29R; CONTINENT IR; ARIZONA 7R; BUBBLE ULTRA 37R; BUBBLE ULTRA 38R.

#### LIBRARY

The normal TLA analyses of the 12 samples from Malawi are under way.

#### LEAR

The TLA analyses were made on two samples of Burley strips blend (control).

#### MISCELLANEOUS

##### Tunisia Tobacco

The chloride contents of seven samples of Tunisia tobacco were determined for the Agronomy Group. The levels were found to be between 1.85% and 3.48%.

#### COLDAC

The specifications for the introduction of the TLA into the HP 1000 data base have been established. The production control of ETNA, RCB and ESTHER was incorporated into these specifications.

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